

REMARKS

I. Status Summary

In this amendment, no claims are added, and no claims are canceled. Therefore, upon entry of this Amendment, claims 1-30 will be pending under consideration. No new matter has been introduced by the present amendment. Reconsideration of the present application as amended and based on the remarks set forth herein below is respectfully requested.

The paragraph at line 15 of page 7 has been amended to replace the reference number **402** with **102**

II. Claim Rejection - 35 U.S.C. § 102

Claims 1-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,550,914 to Clarke et al. (hereinafter, "Clarke"). This rejection is respectfully traversed.

As a preliminary matter, each of the independent claims have been amended to recite that the ticket voucher flow control steps recited therein occur within a signaling node. In Clarke, message interceptors **52** are located outside of STP **48** and SCP **52**. In addition, Clarke states that it would be undesirable to incorporate a message filtering mechanism within a signaling point. (See column 1, line 61 through column 2, line 11 of Clarke). Accordingly, since Clarke discloses interceptors that perform external message filtering, for this reason alone, the rejection of the claims as anticipated by Clarke should be withdrawn.

In addition, claim 1 is directed to a method for controlling call signaling message flow through a signaling node when a signaling link fails. Elements (a) and (b) of claim 1 include the following steps: (1) receiving a first call signaling message at a first communication module associated with a first signaling link; and (2) determining a second signaling link to which the first call signaling message should be routed for outbound transmission based on address information in the first call signaling message. Summarily, Clarke does not disclose (1) receiving a first call signaling message at a first communication module associated with a first signaling link; and (2) determining a second signaling link to which the first call signaling message should be routed for outbound transmission based on address information in the first call signaling message.

Clarke emphasizes a significant difference with elements (a) and (b) of claim 1. Clarke is directed to a message interceptor 52 for a communications signaling network. (column 2, lines 23-25, and Figure 4.) Figure 4 shows several message interceptors 52 inserted on links 51A-51D for monitoring messages on the link and taking predetermined action on detecting messages that meet pre-specified selection criteria. (column 7, lines 29-36.) Message interceptors 52 protect a service control point (SCP) 50 from overload by selectively suppressing messages from the corresponding link before they reach the SCP. (column 7, lines 37-40.) Message interceptors 52 also relieve SCP 50 of particular processing tasks by modifying each message the message interceptor receives that meets the predetermined selection criteria. (column 7, lines 40-46.) Thus, message interceptors 52 are operative to effect message suppression and message modification actions depending on predetermined selection criteria. (column 7,

lines 47-50.) On the other hand, elements (a) and (b) of claim 1 recite receiving a first call signaling message at a first communication module associated with a first signaling link, and determining a second signaling link to which the first call signaling message should be routed for outbound transmission. Nowhere does Clarke disclose routing a call signaling message from a first signaling link to a second signaling link. Interceptors **52** are in-line devices inserted within a single signaling link **51A** or **51B** and therefore do not perform any outbound signaling link selection or routing function. Further, nowhere does Clarke disclose determining a second signaling link to which the first call signaling message should be routed. As noted above, the message interceptor disclosed by Clarke is inserted on a signaling link. The message interceptor simply suppresses and alters messages passed along the link. Therefore, the message interceptor cannot route messages between two links. Thus, for this reason alone, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

In addition, element (c) of claim 1 recites determining whether a linkset associated with the second signaling link is on-hold, and, in response to determining that the linkset is on-hold, storing the first call signaling message in a memory buffer associated with the first communication module. Summarily, Clarke does not disclose determining whether a linkset associated with the second signaling link is on-hold, and, in response to determining that the linkset is on-hold, storing the first call signaling message in a memory buffer associated with the first communication module.

The Examiner contends that Clarke discloses element (c) of claim 1 at column 5, lines 35-38; column 2, lines 64-67; column 6, line 54; Figure 1, element **18**; column 5,

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line 35; column 6, line 54; column 2, lines 55 and 56; column 2, lines 64-67; and column 2, lines 23-67. At lines 54-60 of column 6, Clarke discloses that it can be determined that a signaling link is on-hold by reading the Link Status Signal Unit (LSSU). Further, Clarke discloses extracting data carried in messages received from a signaling point and transferring the extracted data to a protocol engine. (column 2, lines 50-64.) However, Clarke does not disclose storing a call signaling message in a memory buffer in response to determining that a linkset associated with a second signaling link is on-hold. Thus, for this additional reason, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

In addition, elements (d)-(f) of claim 1 recite the following steps: (1) determining when the linkset becomes off-hold, and, in response, transmitting a ticket voucher request message from the first communication module to a plurality of second communication modules; (2) in response to transmitting the request message, receiving a ticket voucher grant indicating that one of the plurality of second communication modules is capable of transmitting the first call signaling message over an outbound signaling link; and (3) in response to receiving the grant, routing the first call signaling message to one of the second communication modules based on address information in the call signaling message. Summarily, Clarke does not disclose determining when the linkset becomes off-hold, and, in response, transmitting a ticket voucher request message from the first communication module to a plurality of second communication modules.

The Examiner contends that Clarke discloses element (d) of claim 1 at column 2, lines 55-60; column 7, lines 25-30 and 57-61; column 6, line 54; column 8, 50-57; column 9, line 45; column 12, lines 55-67; and column 13, lines 30-52. Clarke discloses at lines 54-60 of column 6 that it can be determined that a signaling link is on-hold by reading the LSSU. Further, at column 13, lines 30-52, Clarke discloses a message interceptor provided with MTP level 3 mechanisms for dealing with link failure. The output from level-2 protocol engines **64** and **65**, including Message Signal Unit (MSU) data and link status information, is fed to MTP level-3 block **90**. (column 13, lines 32-35.) MSU data related to higher levels is passed up to interception functionality **91** for block **91** for transfer circuit **70** and block **92** for transfer circuit **80**. (column 13, lines 42-45.) Block **91** and **92** contain message interception functionality corresponding to that described above in relation to the forms of message interceptor shown in Figures 5-7. (column 13, lines 45-48.) Figure 5 relates to message suppression, Figure 6 relates to data modification, and Figure 7 relates to message suppression and modification. (column 7, lines 51-53, and column 10, lines 35-39 and 63-67.) Blocks **91** and **92** act on the received data and passes data (which may include response data) back to MTP level-3 block **90** for transmission to the appropriate destination. (column 13, lines 48-52.) With respect to element (d) of claim 1, Clarke fails to disclose transmitting a ticket voucher request message in response to determining when the linkset becomes off-hold. Moreover, there is no mention in Clarke of transmitting any type of message in response to determining when the linkset becomes off-hold. Further, there is no mention in Clarke of transmitting a ticket voucher request message from a first

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communication module to a plurality of second communication modules. For this additional reason, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

With respect to element (e) of claim 1, Clarke fails to disclose receiving a ticket voucher grant indicating that one of the plurality of second communication modules is capable of transmitting the first call signaling message over an outbound signaling link. The Examiner contends that Clarke discloses a ticket voucher grant at lines 55-67 of column 12. However, lines 55-67 of column 12 discloses message interceptors intercepting changeover messages and signaling point 48 sending out changeover messages. Clarke fails to disclose a ticket voucher grant indicating that one of the plurality of second communication modules is capable of transmitting the first call signaling message over an outbound signaling link. Therefore, for this additional reason, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

With respect to element (f) of claim 1, Clarke fails to disclose routing the first call message to one of the second communication modules in response to receiving the grant. Thus, for this additional reason, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

Claims 2-6 depend from claim 1. Therefore, the comments presented above with respect to claim 1 apply equally to claims 2-6. Thus, it is respectfully submitted that the rejection of claims 2-6 is improper and should be withdrawn for the reasons provided for claim 1.

Claim 7 is directed to a method for processing ticket voucher request messages received in response to failure of a signaling link within a signaling node. Claim 1 includes the following steps: (1) receiving, at a first communication module, a ticket voucher request message transmitted from a second communication module; (2) determining whether the ticket voucher request message is intended for the first communication module; (3) in response to determining that the ticket voucher request message is intended for the first communication module, determining whether any grants are available based on the loading capacity of outbound signaling links associated with the first communication module; and (4) in response to determining that grants are available, issuing a grant to the second communication module. Summarily, Clarke does not disclose each and every element recited in claim 7.

The Examiner contends that Clarke discloses claim 7 at column 2, lines 33-64 and 60-64; column 4, lines 1-22; column 7, lines 57-61; and column 13, lines 30-51. With respect to element (a) of claim 7, the Examiner contends that "receiving, at a first communication module, a ticket voucher request message" is disclosed at column 2, lines 33-37, and column 13, lines 30-51 of Clarke. At column 2, lines 33-37, Clarke discloses, a first link interface and a first link-level protocol engine. As noted above, at column 13, lines 30-51, Clarke discloses a message interceptor provided with MTP level 3 mechanisms for dealing with link failure. With respect to element (d) of claim 1, Clarke fails to disclose receiving a ticket voucher request message. Moreover, there is no mention in Clarke of transmitting a ticket voucher request message. For this reason, it is respectfully submitted that the rejection of claim 7 should be withdrawn.

With respect to elements (c) and (d) of claim 7, the Examiner contends that Clarke discloses "determining whether any grants are available based on the loading capacity" and "issuing a grant to the second communication module" at column 4, lines 1-22, and column 2, lines 33-64. Clarke discloses a message interceptor arranged to suppress messages carrying request data specifying a request to which a response is expected. (column 4, lines 12-15.) Clarke also discloses setting up the message interceptor to allow through only a given number of call set up messages in unit time from a particular source. (column 4, lines 9-11.) However, Clarke does not mention determining whether any grants are available based on loading capacity. In addition, Clarke does not disclose issuing a grant in response to determining that grants are available. Thus, for this additional reason, it is respectfully submitted that the rejection of claim 7 should be withdrawn.

Claims 8-11 depend from claim 7. Therefore, the comments presented above with respect to claim 7 apply equally to claims 8-11. Thus, it is respectfully submitted that the rejection of claims 8-11 is improper and should be withdrawn for the reasons provided for claim 7.

Claim 12 is directed to a method for performing flow control in a signaling node in response to signaling link failure using ticket voucher request and grant messages. Element (e) of claim 12 recites a step for issuing a ticket voucher request message to cards capable of sending the call signaling message over an outbound signaling link. Summarily, Clarke does not disclose a step for issuing a ticket voucher request

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message to cards capable of sending the call signaling message over an outbound signaling link.

The Examiner contends that Clarke discloses element (e) of claim 12 at column 4, lines 1-22; column 5, lines 54-61; and column 13, lines 9-52. As stated above, there is no disclosure of issuing a ticket voucher request message at column 4, lines 1-22, of Clarke. In addition, there is no disclosure of issuing a ticket voucher request message at column 13, lines 9-52, of Clarke. With respect to lines 54-61 of column 5, Clarke discloses transferring signaling information between signaling points in messages. However, there is no disclosure of issuing a ticket voucher request message. Therefore, for this reason, it is respectfully submitted that the rejection of claim 12 should be withdrawn.

Claims 13-15 depend from claim 12. Therefore, the comments presented above with respect to claim 12 apply equally to claims 13-15. Thus, it is respectfully submitted that the rejection of claims 13-15 is improper and should be withdrawn for the reasons provided for claim 12.

Claim 16 is directed to a method for performing message flow control in a call signaling message routing node in response to signaling link failure. Claim 16 includes the following steps: (1) issuing ticket voucher request messages for the call signaling messages in the ticket voucher queue; (2) issuing ticket voucher grant messages at a rate based on outbound signaling link capacity; and (3) in response to the ticket voucher grant messages, sending the call signaling messages to outbound signaling links. Summarily, Clarke does not disclose (1) issuing ticket voucher request messages for

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the call signaling messages in the ticket voucher queue; (2) issuing ticket voucher grant messages at a rate based on outbound signaling link capacity; and (3) in response to the ticket voucher grant messages, sending the call signaling messages to outbound signaling links.

The Examiner contends that Clarke discloses issuing ticket voucher request messages and ticket voucher grant messages at column 2, lines 23-67; column 5, lines 30-41; and column 13, lines 30-52. For the reasons provided above, it is believed that Clarke fails to disclose issuing ticket voucher request messages and ticket voucher grant messages. Therefore, for this reason, it is respectfully submitted that the rejection of claim 16 should be withdrawn.

Claim 17 depends from claim 16. Therefore, the comments presented above with respect to claim 16 apply equally to claim 17. Thus, it is respectfully submitted that the rejection of claim 17 is improper and should be withdrawn for the reasons provided for claim 16.

Claim 18 is directed to a signaling node for using ticket vouchers to internally throttle call signaling messages enqueued in response to signaling link failure. Claim 18 includes the following: (1) a first communication module for determining whether messages are present in a ticket voucher queue and for issuing ticket voucher request messages in response to determining that messages are present in the ticket voucher queue; and (2) a plurality of second communication modules for receiving the ticket voucher request messages, determining whether any ticket voucher grants are available, and, in response to determining that ticket voucher grants are available,

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issuing ticket voucher grants to the first communication module, wherein, in response to receiving the ticket voucher grants, the first communication module forwards the call signaling messages to one of the second communication modules for outbound processing. Summarily, Clarke does not disclose each and every element recited in claim 18.

The Examiner contends that Clarke discloses a first communication module for issuing ticket voucher request messages. The Examiner also contends that Clarke discloses a plurality of second communication modules for receiving ticket voucher grants to the first communication module, wherein, in response to receiving the ticket voucher grants, the first communication module forwards the call signaling messages to one of the second communication modules for outbound processing. For the reasons provided above, it is believed that Clarke fails to disclose issuing ticket voucher request messages and ticket voucher grant messages. In addition, as noted above, it is believed that Clarke does not disclose forwarding signaling messages to one of the second communication modules for outbound processing in response to receiving the ticket voucher grants. Therefore, for this reason, it is respectfully submitted that the rejection of claim 18 should be withdrawn.

Claims 19-23 depend from claim 18. Therefore, the comments presented above with respect to claim 18 apply equally to claims 19-23. Thus, it is respectfully submitted that the rejection of claims 19-23 is improper and should be withdrawn for the reasons provided for claim 18.

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Claim 24 is directed to a signaling node for using ticket voucher messages to internally throttle call signaling messages stored in response to signaling link failure. Claim 24 includes a first communication for receiving call signaling messages addressed to an on-hold signaling link and, in response, for enqueueing the call signaling messages and issuing ticket voucher request messages for the call signaling messages; and (2) a third communication module for monitoring the outbound signaling link processing capacity associated with the second communication modules and for issuing ticket voucher grant messages based on outbound signaling link processing capacity, wherein the first communication module forwards call signaling messages to the second communication modules in response to the ticket voucher grant messages. Summarily, Clarke does not disclose the above elements recited in claim 24.

The Examiner contends that Clarke discloses a first communication module for issuing ticket voucher request messages. The Examiner also contends that Clarke discloses a plurality of second communication modules for receiving ticket voucher grant messages based on outbound signaling link processing capacity, wherein the first communication module forwards call signaling messages to the second communication modules in response to the ticket voucher grant messages. For the reasons provided above, it is believed that Clarke fails to disclose issuing ticket voucher request messages and ticket voucher grant messages. Therefore, for this reason, it is respectfully submitted that the rejection of claim 24 should be withdrawn.

Claim 25 depends from claim 24. Therefore, the comments presented above with respect to claim 24 apply equally to claim 25. Thus, it is respectfully submitted that

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the rejection of claim 25 is improper and should be withdrawn for the reasons provided for claim 24.

Claim 26 is directed to a computer program product including computer-executable instructions embodied in a computer-readable medium for performing the following steps: (1) issuing ticket voucher request messages to outbound communication modules; (2) receiving ticket voucher grant messages from the outbound communication modules; and (3) routing the call signaling messages to the outbound communication modules in response to the grant messages. Summarily, Clarke does not disclose (1) issuing ticket voucher request messages to outbound communication modules; (2) receiving ticket voucher grant messages from the outbound communication modules; and (3) routing the call signaling messages to the outbound communication modules in response to the grant messages.

The Examiner contends that Clarke discloses a first communication module for issuing ticket voucher request messages to outbound communication modules. The Examiner also contends that Clarke discloses receiving ticket voucher grant messages from the outbound communication modules, and routing the call signaling messages to the outbound communication modules in response to the grant messages. For the reasons provided above, it is believed that Clarke fails to disclose issuing ticket voucher request messages and ticket voucher grant messages. Therefore, for this reason, it is respectfully submitted that the rejection of claim 26 should be withdrawn.

Claims 27-30 depend from claim 26. Therefore, the comments presented above with respect to claim 26 apply equally to claims 27-30. Thus, it is respectfully submitted

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that the rejection of claims 27-30 is improper and should be withdrawn for the reasons provided for claim 26.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

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